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REMARKS/ARGUMENTS

The correction suggested for claim 10 is made.

The claims are rejected primarily in view of Kaga et al. (US 2002/0008747) as anticipated or rendering obvious (in combination with other references) the features of the claims.

The limitation of the original claim 5 is incorporated into claim 1 and into claim 12. Claim 5 is canceled. All other claims remain as originally presented except for the correction of claim 10.

Claims 1 and 12 are amended to include the features of original claim 5, thereby to better define the present invention. The claim 5 feature requires the weight ratio of inorganic pigment to resin fine particles to be from 3/7 to 7/3.

As required in claim 1, the image receiving media being used in the present invention comprises:

(1) a support member having a non-solvent-permeable resin layer, and an ink image receiving layer, which is provided on the support member, having laminated layers of:

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(2) a solvent absorbing layer containing inorganic fine particles and a binder, and

(3) a surface portion layer containing resin fine particles, an inorganic pigment and a binder, wherein a weight ratio of the inorganic pigment to the resin fine particles (inorganic pigment/resin fine particles) is from 3/7 to 7/3.

Apparatus claim 12 includes device features to meet the ink-jet recording method requirements. That is, the apparatus includes features to apply, for example, the required heat-treatment condition.

One of the characteristics of the present invention is utilizing the image receiving medium having a surface portion layer including an inorganic fine particles, and applying appropriate processing conditions for the results.

As described in the specification of the present invention (see page 12, lines 2 - 10);

"The inventors have found that an absorbing speed is improved more by a constitution incorporating an inorganic pigment than being comprised of only resin fine particles as a filler of a surface portion layer. However, it has been proved that to satisfy uniform and high gloss and abrasion resistance is difficult in case of performing a heating and pressing treatment after images are recorded on an image receiving layer comprised of said

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resin fine particles and an inorganic pigment",

therefore,

"The inventor have found, as a result of various studies with respect to treatment conditions to achieve uniform and high gloss, that it is necessary to set heating conditions within a specific range defined a glass transition temperature of thermoplastic resin particles and a melting point of a resin layer of a support, to accomplish the invention." (see page 13, lines 15 - 21).

wherein the treatment condition is defined as follows, as described in claim 1:

..."wherein the heating and pressing treatment satisfies conditions of following expressions (1) and (2) at the same time,  
expression (1):  $(T - T_g) \times t > 2$   
expression (2) :  $(T - T_m) \times t < 3$

wherein, T represents a surface temperature (°C) of a member of the heating and pressing device, which is arranged on the ink image receiving layer side of at the position where heating and pressing treatment is conducted;  $T_g$  represents a glass transition temperature of the resin fine particles (°C); t represents a processing time (second) of the heating and pressing treatment; and  $T_m$  represents a melting temperature (°C) of the non-solvent-permeable resin layer.

On the other hand, Kaga et al (US 2002/008747 A1) discloses an ink recording medium comprising:

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- (1) a support having;
- (2) an ink receptive layer (the outermost layer) comprising thermoplastic resinous particles; and preferably
- (3) a solvent absorptive layer having a void layer adjacent to a thermoplastic resinous layer. (see column 0038 of Kaga et al),

wherein Kaga et al also disclose that "it is necessary that the ink solvent adsorptive layer exhibit pigment ink solvent absorbing capability. Although said capability is achieved by incorporating fine organic solid particles into said the ink solvent adsorptive layer, the ink solvent absorption layer containing the inorganic particles exhibits more excellent solvent absorbing capacity than that containing organic particles (see column 0051).

This means that Kaga et al discloses the ink solvent absorption layer containing the inorganic particles. Namely, Kaga et al does not disclose the surface portion layer (this, corresponds to the ink receptive layer of Kaga et al). including the inorganic particles.

Moreover, Kaga et al. discloses only the preferable range of the Tg of thermoplastic resinous particles from 50 to 130°C, and

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the heater device which preferably heats so that the temperature of the medium becomes at 50 to 150°C (columns 0048, and 0073).

Kaga et al. does not disclose the  $T_m$  at al.

Furthermore, Kaga et al. does not discloses the additional important characteristics of the present invention: namely, the condition of heating and pressing treatment to satisfy conditions of following expressions (1) and (2) at the same time,

expression (1):

$$(T - T_0) \times t > 2$$

expression (2):

$$(T - T_m) t < 3.$$

This condition is very important for the system utilizing the above-mentioned recording medium. Even if the temperature range of  $T_a$  of the thermoplastic resinous particles is from 50 to 130°C, and the surface temperature of a heating and pressing device is from 50 to 150°C, unless the above expression (1) and (2) are satisfied at the same time as required by the claims, the treated image will be degraded in glossiness, in uniformity of glossiness or in anti-abrasion property. Evidence of this unexpected advantage can be seen from the testing reported on page 74, in Table 1 of the present specification. Comparative

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Examples 9, 10 and 11 were deficient (rating C) in at least one of these properties.

In conclusion, Kaga et al, does not disclose the characteristic features of the present invention, namely:

(1) a surface portion layer containing an inorganic pigment;  
and

(2) heating and pressing treatment conditions of,  
expression (1) :

$$(T - T_a) \times t > 2$$

expression (2):

$$(T - T_M) \times t < 3.$$

These features are critically important to achieve, simultaneously, a high speed and high image quality recording as described above.

Therefore, the present invention would not be anticipated by Kaga et al.

Furthermore, concerning the obviousness rejections under 35 USC 103, Kaga et al. is relied on to show the present invention, with additional features shown by various secondary art. However, adding the secondary references to show additional features of the dependent claims, does not bridge the missing

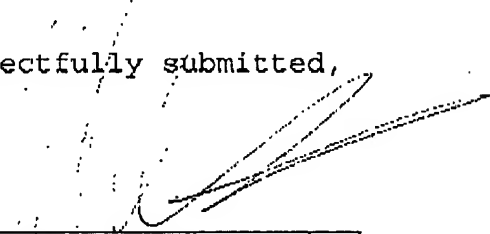
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teaching to complete the invention, or render the missing  
teaching obvious. Therefore, no combination of the cited art  
renders the present invention obvious.

Withdrawal of the rejections and allowance of the  
application is respectfully requested.

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Respectfully submitted,

  
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